

Serial No.: 10/767,587

Amendment in Reply to Official Action dated 04/07/2006

**Amendments to the Drawings:**

Please find enclosed a replacement formal drawing sheet 3/15 labeled "Replacement Sheet" containing FIG. 3, in which the reference numeral "37" designating the lower portion of the extension pipe 23 has been changed to --20--. Also enclosed is a sheet 3/15 labeled "Annotated Sheet Showing Changes" pointing out the location of this change.

## REMARKS/ARGUMENTS

### **1. The Information Disclosure Statement filed 1/29/04**

The applicants understand that they are obligated to submit “material information” to the Patent and Trademark Office regardless of whether it can be cited on a form in compliance with MPEP 609 and regardless of whether the rules of the Patent and Trademark Office require the Examiner to consider it. The Examiner is respectfully requested to initial each reference considered, whether or not the citation is in conformance with MPEP 609.

The applicants have searched for better copies of the references, and the applicants are submitting their best copies of references C1-C3 and C5-C12 in the electronic format recommended by the PDF Guidelines for EFS-Web. The applicants also searched for publication dates or published versions of the documents designated C5-C32 and C34-C36, and are submitting a supplemental Information Disclosure Statement including the results of that search.

The present application has a filing date of Jan. 29, 2004, and no earlier filing date is being claimed. The Examiner should indicate consideration of every document with a publication year date of 2002 or earlier regardless of the reason that the information may be considered material. The Examiner is respectfully requested to consider the documents that are not published, undated, or have simply a year date of 2003 or later because they relate to issues other than patentability with respect to printed publications under 35 U.S.C. 102(b), such as inherent properties of materials invented by others (e.g., PEEK, UCON fluids, Araldite 1014,

and various kinds of elastomer), and the circumstances surrounding the development of the invention at Oil States Industries, Inc.

The enclosed supplemental Information Disclosure Statement lists the Oil States Industries development documents previously submitted as exhibits. The previously submitted documents were made available to the public on about August 4, 2005 when these documents could be obtained from the Patent and Trademark Office file wrapper pursuant to 37 C.F.R. 1.14 (a)(1)(iii) upon publication of the present patent application. The enclosed supplemental Information Disclosure Statement also lists additional Oil States Industries development documents that are being submitted with this amendment.

**2. Correction of drawings.**

FIG. 3 has been amended so that the reference numeral “37” designating the lower portion of the extension pipe 23 has been changed to --20--.

**3. Correction of the specification.**

Paragraph [00035] has been amended to use the preferred spelling of propylene glycol. Propylene glycol is well known as a nontoxic antifreeze. See the enclosed pages 876-877 of the Merck Index, cited as Ref. C44 on the enclosed supplemental Information Disclosure Statement, disclosing properties and uses of propylene glycol. See also applicants’ cited Ref. C10, “SCR FlexJoint®-Bellows,” which says: “The cavity between the body/flex element and the bellows is sealed and filled with Compenol™ a water-propylene glycol based corrosion inhibiting fluid.”

Paragraph [00037] has been amended so that the reference numeral 20 is now used to designate the lower portion of the extension pipe instead of the reference numeral 37 in conformance with the correction of the drawings.

Paragraph [00045] has been amended in line 1 to change “75” to --76--.

#### **4. Amendments to the claims.**

In the Official Action, pages 4 and 5, the Examiner objected to claims 1-3, 5-15, 19-30, 38-39, and 43-53 due to a number of informalities. In reply, with respect to the “inner layers,” “outer layers,” “inner elastomer layers,” and “outer elastomer layers,” claim 1 has been amended to recite “the elastomer layers including inner elastomer layers near to the extension pipe and outer elastomer layers away from the extension pipe, ...” Independent claims 33 and 48 have been amended in a similar fashion. With respect to the “inner reinforcement layers” and the “outer elastomer layers,” claim 2 has been amended to recite “wherein the reinforcement layers include inner reinforcement layers near to the extension pipe and outer reinforcement layers away from the extension pipe, ...” With respect to “high temperature,” the claims have been amended to remove this terminology in response to the later objection that this terminology is indefinite under 35 USC 112, second paragraph.

In claim 19, line 2, the comma has been deleted. Claim 19 has also been amended to point out that the multi-section ring retains the non-metallic material inserted into the extension pipe because the multi-section ring engages the extension pipe and is disposed over the non-metallic material inserted into the extension pipe. For example, as show in applicants’ FIG. 3

and 5 and as described in paragraphs [00040], [00041], and [00042] of applicants' specification, a ring 53 is welded to the top of the extension pipe 26, the ring 53 retains a multi-section lock ring 55 fitted over the heat shield 33 made of polyetheretherkeytone (PEEK) reinforced with 30 percent of randomly-oriented chopped glass fiber. Claim 43 has been amended in a similar fashion. Claim 20 has been amended to explicitly claim "at least one force-fitted pin disposed in a section of the multi-section ring and in the non-metallic material inserted into the extension pipe" as shown in applicants' FIG. 5. As described in paragraphs [00041] and [00042] of applicants' specification, for example, force-fitted pins 56 connect the sections of the multi-section lock ring 55 to the heat shield 33 made of polyetheretherkeytone (PEEK) reinforced with 30 percent of randomly-oriented chopped glass fiber. Claim 44 has been amended in a similar fashion.

Claim 21 has been amended to change "inserted" to --disposed--. Claim 45 has been amended in a similar fashion. In claim 53, line 1, "47" has been changed to --49-- to provide proper antecedent basis for "the inner annulus" and "the bellows."

On page 7 of the Official Action, claims 1-3, 5-15, 19-30, 33-34, 38-39 and 43-53 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In reply, claims 1-3, 5-12, 33-34, and 48 have been amended to remove the phrase "high temperature," and claims 1, 33, and 48 have been amended to add "for conveying production fluid greater than 180 °F in a subsea environment," for example, as shown in applicants' FIG. 1

and as described in applicants' specification in paragraphs [0001], [0005], [00027], [00028], and [00045].

As amended, each of the independent claims also include a combination of positively recited structural elements especially adapted for conveying production fluid greater than 180 °F in a subsea environment. Claim 1 has been amended to recite "the inner elastomer layers have greater shear area than the outer elastomer layers and the inner elastomer layers have a higher shear modulus than the outer elastomer layers to shift strain from the inner elastomer layers to the outer elastomer layers." These features were originally claimed in claims 2 and 6, and are described as used together in the preferred embodiment (the elected Species I) in paragraphs [00047] to [00051] of the applicants' specification, in order to shift strain away from the warmer inner elastomer layers to the colder outer elastomer layers. (See also applicants' Abstract.) Unless it is desired to shift strain away from the inner layers to the outer layers, one would not combine these features. Instead, if the inner elastomer layers would have greater shear area than the outer elastomer layers, one might want to equalize the strain on the elastomer layers by making the inner elastomer layers have a lower shear modulus than the outer elastomer layers.

Appellants' independent claims 33 and 48 specifically recite "a heat shield disposed in the extension pipe in the vicinity of the laminated elastomeric flex element." Claim 33 has been amended to further recite "wherein the inner elastomer layers have a higher shear modulus than the outer elastomer layers to shift strain from the inner elastomer layers to the outer elastomer layers." Claim 48 as amended defines that the laminated elastomeric flex element is constructed to shift strain from the inner elastomer layers to the outer elastomer layers, and the extension

pipe is made of nickel-chromium-iron alloy in the vicinity of the laminated elastomeric flex element. These features are especially adapted to protect the inner elastomer layers of the laminated elastomeric flex element from the modulus softening effect of production fluid greater than 180 °F flowing through the extension pipe in a subsea environment, as described, for example, in paragraph [00045] of applicants' specification.

Each of claims 23, 29, 47, 48, and 51 has been cancelled or amended to remove the term "low heat conductivity metal" or to replace the term "low heat conductivity metal" with "nickel-chromium-iron alloy," for example, as originally claimed in claims 24, 29, and 52, and as described in paragraph [00037] of applicants' specification.

Each of claims 9, 10, 11, 12, 26, 48, and 49 has been cancelled or amended to remove the term "high temperature resistant."

#### **5. New Claims 56-71**

New claims 56-71 are more specifically directed to a high temperature flexible pipe joint having the preferred construction for the heat shield. Applicants respectfully submit that new claims 56, 57, and 61-69 read upon the elected Species I.

Support for new claim 56 is as follows. Support for "A flexible pipe joint for conveying production fluid of greater than 180 °F in a subsea environment" has been discussed above. FIG. 3 shows the elected Species I including a body 21 having a cavity 28, a central pipe 39 within the cavity and mounted to the body, an extension pipe 23 extending outward from the cavity of the body, and a laminated elastomeric flex element 25 disposed within the cavity of the body and

coupling the extension pipe to the body, the laminated elastomeric flex element having alternate elastomer layers and reinforcement layers, and a heat shield 33 disposed in the extension pipe in the vicinity of the laminated elastomeric flex element. This is similar to original claim 33, with the addition of the central pipe. This central pipe was introduced in paragraph [00033] of the applicants' specification as follows: "the bellows encloses a cylindrical extension 39 of the attachment flange."

New claim 56 further recites "wherein the extension pipe has a hemispherical portion in the vicinity of the laminated elastomeric flex element and a cylindrical portion away from the laminated elastomeric flex element, ..." Applicants' FIG. 3 shows a hemispherical portion 26 in the vicinity of the laminated elastomeric flex element 25 and a cylindrical portion originally designated 37 (as amended, 20) away from the laminated elastomeric flex element 25. This was defined in applicants' original claims 22 and 46.

Applicants' new claim 56 further defines that the heat shield includes polymeric material, the polymeric material is disposed between the extension pipe and an end portion of the central pipe, the polymeric material includes a hemispherical portion mating with an inner profile of the hemispherical portion of the extension pipe and a cylindrical portion extending into the cylindrical portion of the extension pipe, and the polymeric material contacts the end portion of the central pipe to place the laminated elastomeric flex element in an initial state of compression. This polymeric material is the heat shield insert 33 shown in FIG. 3. As described in paragraph [00036] of applicants' specification:



[00036] In order to shield the upper semispherical portion of the pipe extension 26 from the production fluid, a heat shield 33 is seated within the upper end of the pipe extension. The heat shield 33 includes a hemispherical portion mating with an inner profile of the hemispherical portion 26 of the extension pipe, and the heat shield 33 also includes a cylindrical portion extending into the cylindrical portion of the extension pipe 23. The heat shield 33 contacts the lower end of the cylindrical extension 39 of the attachment flange 22, and this contact places the flex element 25 in an initial state of compression before assembly of the flexible pipe joint 18 into a riser.

Applicants' new dependent claims 57 to 71 add the respective features of applicants' original dependent claims as follows:

New claim:    Original claim:

57	6
58	35
59	36
60	37
61	39
62	19
63	20
64	21
65	24
66	26
67	27

68	28-29
69	30
70	31
71	32

**6. Claim rejections under 35 U.S.C. § 103**

On page 8 of the Official Action, claims 1-3, 5-15, 19-22, 33-34, 38-39 and 43-47 were rejected under 35 U.S.C. 103(a) as being unpatentable over OSI Document entitled “Thunder Horse 12” HPHT SCR FlexJoint Design Summary” in view of OSI Document entitled “Exxon-Erha FlexJoint Preliminary Design Summary,” Applicants respectfully traverse and respectfully submit that these OSI documents are not “prior art” because they were not printed publications before the claimed invention by the applicants, nor were they printed publications more than a year prior to the Jan. 29, 2004 filing date of the present application for patent. Nor do the OSI documents show that the invention was known or used by others in this country, or in public use or on sale in this country, more than one year prior to the Jan. 29, 2004 filing date of the present application for patent. As evidence thereof, applicants are submitting the enclosed Rule 132 Declaration of Michael E. Hogan, and additional OSI documents regarding the development of the invention, as referenced in the Declaration of Michael E. Hogan, and cited on the enclosed Information Disclosure Statement. The enclosed Rule 132 Declaration of Michael E. Hogan also shows a long-felt but unsolved need, and commercial success of the claimed invention.

A reference is a “printed publication” if “such document has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it.” *In re Wyer*, 655 F.2d 221, 210 USPQ 790 (CCPA 1981). Dissemination and public accessibility are the keys to the legal determination. *In re Klopfenstein*, 380 F.3d 1345, 1348, 1350, 72 USPQ2d 1117, 1119, 1120 (Fed. Cir. 2004)(a fourteen-slide presentation on poster boards was displayed with no confidentiality restrictions for approximately three cumulative days at two different industry events, found by the court to be a “printed publication” upon considering “the length of time the display was exhibited, the expertise of the target audience, the existence (or lack thereof) of reasonable expectations that the material displayed would not be copied, and the simplicity or ease with which the material displayed could have been copied.”)

In the present case, it is not understood how the submission of the OSI proposals to Exxon and BP would make the OSI proposals publicly accessible. There is no reason to conclude that the OSI proposals were disseminated further than Exxon and BP and their affiliates as reasonably necessary to legitimately advance the experimental development of the invention. Instead, due to their mutual interest, agreement, and cooperative relationship, all of the parties had a desire and reasonable expectation that the information relating to the invention would not be further disseminated and would not be publicly accessible. See the enclosed Rule 132 Declaration of Michael E. Hogan and the documents cited therein regarding the relationship and obligations of the parties.

In addition, the OSI proposals and their acceptance by Exxon and BP were not “offers for sale” or “sales” under the on-sale bar of § 102(b). For there to be an on-sale bar of § 102(b), two conditions must be satisfied before the critical date of Jan. 29, 2003 (i.e., the date one year prior to the application filing date). First, the claimed invention must be the subject of a commercial sale. Second, the claimed invention must be ready for patenting. *Pfaff v. Wells Elecs.*, 525 U.S. 55, 67-68 (1998). The first prong of the Pfaff test entails an assessment of whether the circumstances surrounding a pre-critical date sale objectively show that it was primarily made for experimentation. If the sale was primarily for experimentation rather than commercial gain, then the sale is not invalidating under § 102(b). The question “is whether the primary purpose of the inventor at the time of the sale, as determined from an objective evaluation of the facts surrounding the transaction, was to conduct experimentation.” *General Motors Corp. v. General Electric Co.*, 417 F.3d 1203, 1210; 75 U.S.P.Q.2d 1650 (Fed. Cir. 2005). The objective factors include “(1) the necessity for public testing; (2) the amount of control over the experiment retained by the inventor; (3) the nature of the invention; (4) the length of the test period; (5) whether payment was made; (6) whether there was a secrecy obligation; (7) whether records of the experiment were kept; (8) who conducted the experiment; (9) the degree of commercial exploitation during testing; (10) whether the invention reasonably requires evaluation under actual conditions of use; (11) whether testing was systematically performed; (12) whether the inventor continually monitored the invention during testing; and (13) the nature of the contacts made with potential customers.” *Allen Eng’g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1353, 63 U.S.P.Q.2d 1769, 1780 (Fed. Cir. 2002). The inventor’s control and

customer awareness are important factors, since the experimental use doctrine operates in the inventor's favor to allow the inventor to refine his invention or to assess its value relative to the time and expense of prosecuting a patent application. *In re Hamilton*, 882 F.2d 1576, 1581 (Fed. Cir. 1989); *Lough v. Brunswick Corp.*, 86 F.3d 1113, 1120 (Fed. Cir. 1996); *General Motors Corp.*, 417 F.3d at 1214-15. Payment does not *per se* make a section 102(b) bar. *Baker Oil Tools, Inc. v. Geo Vann, Inc.*, 828 F.2d 1558, 1564 (Fed. Cir. 1987) (Baker charged for the packer components left in the well after completion of the packing); *T.P. Laboratories, Inc. v. Professional Positioners, Inc.*, 724 F.2d 965, 971-972, 220 USPQ 577, 582 (Fed. Cir. 1984) (payment made for orthodontic appliances on three patients is "merely a piece of evidence to add to the evidentiary scale,"); *Merrill v. Builders Ornamental Iron Co.*, 197 F.2d 16, 19-20, 93 U.S.P.Q. 276, 279 (10th Cir. 1952) (apparatus used to straighten car frames for which charge was made not "on sale" because "collateral to the development of the invention in its complete and perfected form"), *Gates Learjet Corp. v. Magnasync Craig Corp.*, 339 F. Supp. 587, 598-99, 173 U.S.P.Q. 203, 210-11 (D. Colo. 1972) (sale of 22 experimental units for \$250-\$400 each was "good faith use for experimental purposes").

In the present case, the inventors conducted the testing. The progress and results of the testing were reported to Exxon and BP, and the test results were kept secret. Due to the nature of the invention, testing was necessary for making the high temperature flexible pipe joint fit for actual use in a subsea environment. Cooperation between the inventors, Exxon, and BP was necessary for devising a valid test methodology and bearing the expense of the extensive testing.

With respect to the content of the OSI documents, it is not seen where the OSI Document entitled "Exxon-Erha FlexJoint Preliminary Design Summary" discloses that the inner elastomer layers have a greater thickness than the outer elastomer layers, as was defined in claims 5, 7, and 34.

With respect to the selection of a known material on the basis of its suitability for an intended use, one cannot base obviousness upon what a person skilled in the art might try or might find obvious to try, but rather must consider some reason or suggestion in the prior art would have led a person skilled in the art to produce the claimed invention. See, in re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed.Cir. 1988); In re Geiger, 815 F.2d 686, 2USPQ2d 1276 (Fed. Cir. 1987). The policy of the Patent and Trademark Office has been to follow in each and every case the standard of patentability enunciated by the Supreme Court in Graham v. John Deere Co., 148 U.S.P.Q. 459 (1966). M.P.E.P. § 2141. As stated by the Supreme Court:

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.

148 U.S.P.Q. at 467.

The problem that the inventor is trying to solve must be considered in determining whether or not the invention would have been obvious. The invention as a whole embraces the structure,

properties and problems it solves. In re Wright, 848 F.2d 1216, 1219, 6 U.S.P.Q.2d 1959, 1961 (Fed. Cir. 1988).

In the present case, the problem is set out in paragraph [0005] of the applicants' specification:

[0005] Recently there has been a need for flexible pipe joints that are capable of long-term operation when subjected to temperatures greater than 180 °F (82 °C). In particular, wells are being drilled into the seabed at depths of more than 1000 meters in the Gulf of Mexico and off the shore of Nigeria. It is desired to use flexible pipe joints in risers for delivering production fluid from the wellhead on the seabed to a floating platform. However, the planned depths of the wells below the seabed and the desired high flow rates would cause the temperature of the production fluid to substantially exceed 180 °F (82 °C). In addition, the ambient seawater temperature is relatively high (80 to 85 °F (27 to 29 °C)). If a conventional flexible pipe joint were used to convey the production fluid, the flex element in the flexible joint would be continually subjected to temperatures in excess of the usual limit of 180 °F (82 °C). This would cause the service life of the conventional flexible pipe joint to be severely degraded. Therefore, there is a desire for a high temperature flexible pipe joint that would have a service life of at least twenty years when conveying production fluid at temperatures considerably in excess of 180 °F (82 °C).

As set out in paragraph [00029] of the applicants' specification, the elastomeric flex element in the high temperature flexible pipe joint functions as a pressure seal as well as a flexible bearing:

[00029] In the worst case, continuously subjecting an elastomeric flex element in a flexible joint to a temperature above its design temperature limit

could lead to a failure of the elastomeric flex element before the end of its service life. Typically the elastomeric flex element functions as a pressure seal as well as a flexible bearing. Therefore, a failure of the elastomeric flex element due to excessive temperature exposure could cause an undesired spill of production fluid in addition to a need for shutting down production during replacement of the flexible joint.

As further set out in paragraph [00057] of applicants' specification, for a high temperature flexible pipe joint, the elastomer of the elastomeric flex element should have a variety of properties:

**[00057]** In general, to increase the permissible operating temperature for a conventional elastomeric flexible joint simply by substituting an elastomer of higher temperature tolerance, the elastomer must have a number of properties that cannot be substantially degraded over the desired service life. These properties include elastomer tensile strength, modulus softening resistance, fatigue resistance, creep resistance, and strength of the elastomer-metal bond between the elastomer layers and the metal reinforcements. Also, it is desired for the elastomer to be chemically resistant to hydrocarbon production fluid, in order to prevent rapid failure of the elastomeric flex element in case production fluid would leak through the bellows or upper or lower bellows seal into the inner annulus and come into contact with the elastomeric flex element. ...

In view of these considerations, it is not a matter of obvious design choice to use efficient vulcanized nitrile butadiene rubber, peroxide cured hydrogenated nitrile butadiene rubber, or a fluoroelastomer in the elastomeric flex element of a high temperature flexible pipe joint.



Moreover, the cited prior art and the OSI documents evidence a long felt but unsolved need for a high temperature flexible pipe joint as disclosed and claimed by applicants.

With respect to claim 47, applicants respectfully object to the Official Action taking “official notice” of the use of a baffle in a bellows joint in order to aid heat transfer. The Official Action cites no evidence that the use of such a baffle was well known in the prior art of flexible pipe joints. To the contrary, the applicants have not found such a baffle in the prior art of flexible pipe joints despite a search by the European Patent Office in EP-A-05,250,427.1 and reported in Ref. C1 in applicants’ IDS filed May 27, 2005.

On page 10 of the Official Action, claims 23-25 and 48 were rejected under 35 U.S.C. 103(a) as being unpatentable over OSI Document entitled “Thunder Horse 12” HPHT SCR FlexJoint Design Summary” in view of OSI Document entitled “Exxon-Erha FexJoint Preliminary Design Summary,” and further in view of OSI Document entitled “Crazy Horse 12” Import FlexJoint Design.” Applicants respectfully traverse and respectfully submit that these OSI documents are not “prior art” because they were not printed publications before the claimed invention by the applicants, nor were they printed publications more than a year prior to the Jan. 29, 2004 filing date of the present application for patent. Nor do the OSI documents show that the invention was known or used by others in this country, or in public use or on sale in this country, more than one year prior to the Jan. 29, 2004 filing date of the present application for patent. As evidence thereof, applicants are submitting the enclosed Rule 132 Declaration of Michael E. Hogan. See the applicants’ remarks above with respect to the rejection of claim 1.

On page 11 of the Official Action, claims 26-30 were rejected under 35 U.S.C. 103(a) as being unpatentable over OSI Document entitled “Thunder Horse 12” HPHT SCR FlexJoint Design Summary” in view of OSI Document entitled “Exxon-Erha FlexJoint Preliminary Design Summary,” and further in view of Applicants’ Admitted Prior Art (paragraph [00035] of the specification). Applicants respectfully traverse and respectfully submit that these OSI documents are not “prior art” because they were not printed publications before the claimed invention by the applicants, nor were they printed publications more than a year prior to the Jan. 29, 2004 filing date of the present application for patent. Nor do the OSI documents show that the invention was known or used by others in this country, or in public use or on sale in this country, more than one year prior to the Jan. 29, 2004 filing date of the present application for patent. As evidence thereof, applicants are submitting the enclosed Rule 132 Declaration of Michael E. Hogan. See the applicants’ remarks above with respect to the rejection of claim 1.

With respect to claim 27, applicants respectfully disagree with the contention that the applicants have stated that a conventional high temperature flexible joint using a bellows is typically filled with polyalkylene glycol. Instead, applicants stated that a conventional flexible joint using a bellows is typically filled with a non-corrosive glycol-based fluid, such as an aqueous propylene glycol solution. The prior art includes the use of non-corrosive glycol-based fluids such as propylene glycol and ethylene glycol in flexible pipe joints. (See, for example, Schwemmer U.S. Pat. 4,183,556 col. 8, lines 32-34, disclosing a cavity filled with a substantially incompressible liquid such as water, mineral oil, or a mixture of water and ethylene glycol.) Ethylene glycol is well known as toxic antifreeze, and propylene glycol is well known as non-

toxic antifreeze. Polyalkylene glycol is an entirely different class of glycol-based fluid. It is not seen where the prior art discloses or suggests the use of polyalkylene glycol in a flexible pipe joint. Polyalkylene glycol has a distinctive characteristic of high temperature resistance providing substantially enhanced utility in a high temperature flexible pipe joint.

With respect to claim 30, applicants again respectfully object to the Official Action taking "official notice" of the use of a baffle in a bellows joint in order to aid heat transfer, for the reasons stated above with respect to claim 47.

On page 12 of the Official Action, claims 49-53 were rejected under 35 U.S.C. 103(a) as being unpatentable over OSI Document entitled "Thunder Horse 12" HPHT SCR FlexJoint Design Summary" in view of OSI Document entitled "Exxon-Erha Flexjoint Preliminary Design Summary," in view of OSI Document entitled "Crazy Horse 12" Import FlexJoint Design," and further in view of Applicants' Admitted Prior Art (paragraph [00035] of the specification). Applicants respectfully traverse and respectfully submit that these OSI documents are not "prior art" because they were not printed publications before the claimed invention by the applicants, nor were they printed publications more than a year prior to the Jan. 29, 2004 filing date of the present application for patent. Nor do the OSI documents show that the invention was known or used by others in this country, or in public use or on sale in this country, more than one year prior to the Jan. 29, 2004 filing date of the present application for patent. As evidence thereof, applicants are submitting the enclosed Rule 132 Declaration of Michael E. Hogan. See the applicants' remarks above with respect to the rejection of claim 1.

With respect to claim 50, applicants respectfully disagree with the contention that the applicants have stated that a conventional high temperature flexible joint using a bellows is typically filled with polyalkylene glycol. See the applicants' remarks above with respect to claim 27.

With respect to claim 53, applicants again respectfully object to the Official Action taking "official notice" of the use of a baffle in a bellows joint in order to aid heat transfer, for the reasons stated above with respect to claim 47.

In view of the above, it is respectfully submitted that the application is in condition for allowance. Early allowance is earnestly solicited. Unless the subject matter of the claims is considered to be allowable, applicants respectfully request a personal interview prior to issuance of any final action.

Respectfully submitted,



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